

WHAT IS CLAIMED IS:

1 1. A hierarchy for representing a plurality of items stored in a database, said
2 hierarchy comprising:
3 a plurality of nodes each representative of a subset of the items; and wherein:
4 each of the nodes is a child of one other node, except for a root node, which is
5 a child of no other node and is an ancestor of all of the nodes;
6 a first portion of the nodes each specify one or more constraints defining a
7 scope of the subset of items represented by each of the first portion
8 relative to their parent node; and
9 a second portion of the nodes specify no constraints, each of the second
10 portion establishing a logical grouping defining a scope of the subset
11 of the items represented by each of the second portion.

1 2. The hierarchy of claim 1 wherein the nodes of the second portion have one or
2 more child nodes, each representative of some portion of the subset items that are logically
3 grouped.

1 3. The hierarchy of claim 1 wherein the scope of the items represented by each of
2 the nodes is constrained by an aggregation of any constraints specified by the node and all of
3 its ancestors.

1 4. The hierarchy of claim 1 wherein the constraints comprise one or more
2 permissible values of one or more attributes of the items.

1 5. The hierarchy of claim 1 wherein the attributes and attribute values are stored
2 with the items in the database.

1 6. The hierarchy of claim 3 wherein the aggregation of any constraints comprises
2 a logical ANDing of all of the constraints aggregated.

1 7. The hierarchy of claim 6 wherein the aggregation of constraints comprises a
2 search rule that includes all of the items that meet the aggregation of constraints.

1 8. The hierarchy of claim 1 wherein each of the nodes specifies a unique label
2 and a list of the unique labels of its children.

1 9. The hierarchy of claim 1 wherein one or more of the nodes specifies a set of
2 display data.

1 10. The hierarchy of claim 7 wherein:
2 a third portion of the nodes are leaf nodes, each of the leaf nodes having no children;
3 and
4 said hierarchy operable to determine the aggregation of constraints and to generate the
5 search rule for each leaf node in response to activation of the leaf node.

1 11. A method of representing a plurality of items in a database hierarchically, each
2 of the items associated with one or more attributes, each of the attributes having one or more
3 values, said method comprising:
4 apportioning the plurality of items into subsets;
5 representing each of the subsets with a node in a hierarchy, each of the nodes being a
6 child of one other node, except for a root node, which is a child of no other of
7 the nodes and is an ancestor of all of the nodes in the hierarchy;
8 specifying one or more constraints for each of a first portion of the nodes, the
9 constraints defining a scope of the subset of items represented by each of the
10 first portion relative to their parent node; and
11 establishing a logical grouping of the items for a second portion of the nodes, the
12 logical grouping defining a scope of the subset of items represented by each of
13 the second portion of nodes, no constraints being specified for any of the
14 second portion of the nodes.

1 12. The method of claim 11 wherein the nodes of the second portion have one or
2 more child nodes, each representative of some portion of the subset of the items that are
3 logically grouped.

1 13. The method of claim 11 wherein the scope of the items represented by each of
2 the nodes is constrained by an aggregation of any constraints specified by the node and all of
3 its ancestors.

1 14. The method of claim 11 wherein the constraints comprise one or more
2 permissible values of one or more of the attributes of the items.

1 15. The method of claim 11 wherein the attributes and attribute values are stored
2 in conjunction with the items in the database.

1 16. The method of claim 13 wherein the aggregation of any constraints comprises
2 a logical ANDing of all of the constraints aggregated.

1 17. The method of claim 16 wherein the aggregation of constraints comprises a
2 search rule that includes all of the items that meet the aggregation of constraints.

1 18. The method of claim 11 wherein each of the nodes specifies a unique label and
2 a list of the unique labels of its children.

1 19. The method of claim 11 wherein one or more of the nodes specifies a set of
2 display data.

1 20. The method of claim 17 wherein:
2 a third portion of the nodes are leaf nodes, each of the leaf nodes having no children;
3 and
4 said hierarchy operable to determine the aggregation of constraints and to generate the
5 search rule for each leaf node in response to activation of the leaf node.

1 21. A method of browsing items stored in a database using a hierarchy, each of the
2 items associated with one or more attributes, each of the attributes having one or more values,
3 said method comprising:
4 apportioning the plurality of items into subsets;

5 representing each of the subsets with a node in a hierarchy, each of the nodes being a
6 child of one other node, except for a root node, which is a child of no other of
7 the nodes and is an ancestor of all of the nodes in the hierarchy;
8 specifying one or more constraints for each of a first portion of the nodes, the
9 constraints defining a scope of the subset of items represented by each of the
10 first portion; and
11 establishing a logical grouping of the items for a second portion of the nodes, the
12 logical grouping defining a scope of the subset of items represented by each of
13 the second portion of nodes, no constraints being specified for any of the
14 second portion of the nodes;
15 displaying said hierarchy on a computer terminal, wherein each of said nodes are
16 operative to be activated by selecting the node;
17 aggregating the constraints specified by a leaf node and its ancestors in response to
18 selection of one of the leaf nodes;
19 forming a search rule from the aggregation that includes all items that meet the
20 constraints;
21 initiating a search of the database in accordance with the search rule; and
22 returning to the terminal a list of the items that meet the constraints.

23. The method of claim 21 wherein the terminal is connected to the database over
a network.

24. The method of claim 22 wherein the network is the Internet.